Reviews

Paul Kunitzsch and Richard Lorch, *Theodosius,* De habitationibus. *Arabic and Medieval Latin Translations*. Bayerische Akademie der Wissenschaften. Philosophisch-Historische Klasse. Sitzungsberichte-Jahrgang 2011, Heft 1. München 2011

Theodosius of Bithynia was a Greek astronomer and mathematician who lived ca. 100 BC. He wrote three important works on a primitive form of spherical astronomy: *Sphaerica*, *De diebus et noctibus,* and *De habitationibus*.

De habitationibus treats, in a geometrical way, the variations in the visibility of the sky depending on latitude. The text is usually considered to belong to a collection called "little astronomy" by the Greeks and "*jumlat al-mutawassiṭāt*" by the Arabs: the "middle books" that should be read between Euclid and Ptolemy, whose *Almagest* is one of the pieces of the *Great Collection* of astronomy.

The printed version of the Greek text of *De habitationibus* has been available since Fecht's edition published in Berlin in 1927 (*Theodosii de habitationibus liber, de diebus et noctibus libri duo*, Abhandlungen der Gesellschaft der Wissenschaften zu Göttingen, Phil.-hist. Kl., N.F. XIX,4; repr. Nendeln: Kraus, 1970). In this 95-page book, with a handy format of 14 x 22 cm, Kunitzsch and Lorch present a parallel critical edition of the Arabic and Medieval Latin translations. They also offer a non-literal English translation with comments at the end of the book.

The Arabic translation is based on three different manuscripts preserved in Istanbul (A), and in two private libraries in Lahore (N) and New York (K) which all have as their reference Fecht's edition mentioned above. In A and K the translation from Greek to Arabic is attributed to Qusṭā ibn Lūqā (died ca. 300/912-13). This attribution does not appear in N where the text is described in the colophon as a revision of Thābit ibn Qurra al-Ḥarrānī (died 901). The Arabic edition preserves only the name Qusṭā ibn Lūqā. Both names are omitted in the appended English translation, as they are in the Latin version.

The Latin text was established from two manuscripts: Paris (P) and Berlin (B). The translator into Latin was Gerard of Cremona (ca. 1114-

1187). The variant readings introduced by Kunitzsch and Lorch were decided by reference to the Arabic version. They also followed Gerard's lettering of the diagrams.

Theodosius' *De habitationibus* consists of 12 propositions, each of them structured as follows: statement, diagram, example, mathematical proof, and, although not always, the author's commentary introduced by lat. *Dico* (Ar. *fa-aqūlu*). The content deals in particular with the astronomical phenomena observed in places of habitation, that is, *locis in quibus morantur homines* or *masākin*, at extreme latitudes.

The critical edition is masterfully executed and the translation, with a wealth of footnotes, is excellent, as one would expect from these authors. We strongly recommend this book to readers.

Roser Puig

Paul Kunitzsch and Richard Lorch, *Theodosius,* Sphaerica. *Arabic and Medieval Latin Translations*, Boethius, Franz Steiner Verlag, Stuttgart, 2010. 431 pp.

In the last few years, Paul Kunitzsch and Richard Lorch have been working on the enormous task of publishing critical editions of the works of Theodosius in their Arabic and Latin translations. In this issue of *Suhayl,* readers will find a paper by these two scholars on the *De diebus et noctibus* as well as a review of their edition of *De habitationibus* (München, 2011). Here I concentrate on the most important of these publications, the edition of the *Sphaerica*.

The volume contains, on facing pages, the Arabic text and the Latin translation by Gerard of Cremona (pp. 11-311), with an introduction (pp. 1-10), an edition and translation of the notes (marginal, in the text and in a half page) by Abū l-Ḥasan b. Saʿīd in a manuscript from a private library in Lahore (pp. 313-315), an edition and translation of a series of lemmas (extant in mss. Istanbul, Seray, Ahmet III 3464, Paris BnF hebr. 1101 and several Latin mss., among them Paris BnF lat. 9335), related to an inequality stated by Theodosius, without proof, in proposition 11 of the third book, as well as notes added in the Latin translation to proposition 11 of the second book (pp. 316-327), and a careful collection of notes on the manuscript tradition of the geometrical diagrams (pp. 328-341). The volume ends with a "Mathematical summary" (pp. 343-427), which is, in fact, almost an English translation of the book in which the propositions are translated in full and the proofs are formulated in modern notation with notes that compare the Arabic and Latin translations with the Greek original. At the end of the volume there is a complete bibliography (pp. 429-431).

As explained in the introduction, Theodosius' *Sphaerica* is one of the middle books (*al-mutawassiṭāt*) that